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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/707,325	11/06/2000	Wanda Carol Garrett	12421-0030/P04824	9440

29989 7590 08/25/2004

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EXAMINER

VU, THONG H

ART UNIT PAPER NUMBER

2142

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/707,325

Applicant(s)

GARRETT ET AL.

Examiner

Thong H Vu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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1. Claims 1-36 are pending.
2. Applicant's arguments with respect to claims 1-36 have been considered but are moot in view of the new ground(s) of rejection. Claims 1 and 19 were amended. The Final Action is appropriate.

### ***Double Patenting***

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-36 are rejected under the judicially created doctrine of double patenting over claims 1-18 of U. S. Patent No. 6,678,877 B1 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows:

Patent '877(claim 1). A method for creating a PC board (PCB) layout for a circuit, the PCB having predetermined landing areas, comprising: determining components of the circuit; determining the predetermined landing areas in which to place the components; and placing the components on the determined landing areas.

(claim 6) automatically determining the width crop area and the height crop area.

(claim 9) simulating the circuit over a network; producing a result based on the simulation of the circuit; and determining the components based on the simulation of the circuit.

(claim 10) determining, in response to the result, the landing areas configured to accept the components.

(claim 11) allowing a characteristic of the circuit to be changed; determining when the characteristic of the circuit has been changed; and performing another simulation of the circuit when a determination has been made that the characteristic of the circuit has been changed.

Application (claim 1) a computer-readable medium carrying instructions for designing a circuit that satisfies user-specified functional requirements, the instructions including instructions for performing the steps of:

receiving said user-specified functional requirements over a network from a client;

automatically determining, based on said user-specified requirements, components and user information included a topology for constructing a particular circuit that is constructable on a circuit board;

wherein the step of determining components includes determining components that have operational values such that, when said components are arranged according to said topology to form said particular circuit, the particular circuit satisfies said user specified functional requirements; and

delivering to said client over said network component information that identifies said components.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1,19 are rejected under 35 U.S.C. § 102(e) as being anticipated Hemlich et al [Hemlich, 5,903,886].

4. As per claim 19, Hemlich discloses a computer-readable medium carrying instructions for designing a circuit that satisfies user-specified functional requirements [Hemlich, the process of designing intergrated circuit application and PCB, abstract], the instructions including instructions for performing the steps of:

receiving said user-specified functional requirements over a network from a client [Hemlich, information provided by the user, col 7 lines 36-44];

automatically determining, based on said user-specified requirements, components [Hemlich, emulate the computer aided design tools, abstract; col 10 lines 7-40] and user information included a topology for constructing a particular circuit that is constructable on a circuit board [Hemlich, hardware architectures, col 3 lines 25-35; Schematic, col 11 lines 45-60; the matrix represents the pins on nets which are connected to another, col 13 lines 32-67];

wherein the step of determining components includes determining components that have operational values such that [Hemlich, determine the component parameters, col 27 lines 32-55; col 28 lines 15-20], when said components are arranged according to said topology to form said particular circuit, the particular circuit satisfies said user specified functional requirements [Hemlich, the MME is taught how to respond to future

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conditions based on historical data, and learns to respond to new conditions, col 4 lines 12-30; the virtual tools predict the required time, cost, characteristics of the next generation devices to complete the design effort, col 25 lines 40-58]; and

delivering to said client over said network component information that identifies said components [output directly to the user providing information that can be used during the actual process steps, col24 line 63-col 25 line 12].

5. Claim 1 contains the similar limitations set forth of apparatus claim 19. Therefore, claim 1 is rejected for the similar rationale set forth in claim 19.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-18,20-36 are rejected under 35 U.S.C. § 103 as being unpatentable over Hemlich et al [Hemlich, 5,903,886] in view of [Roy et al [Roy, 6,195,613 B1].

6. As per claims 20,2 Hemlich discloses the user interface may or not be graphical [Hemlich, UI, col 24 lines 10-17] and schematic capture symbols for graphical capture [Hemlich, col 12 lines 7-10]. However Hemlich does not detail the client is executing a browser; and the step of delivering said component information includes delivering to said browser one (or more) web pages that identify said components.

A skilled artisan would have motivation to improve the user interface on Hemlich's apparatus by looking into the prior art and found Roy teaching. Roy discloses a method for measuring the component on the PCB which helps the board designers determine the proper values for each component [Roy, col 3 lines 27-65] by using the schematic or fixed topology [Ro, col 7 lines 30-45Fig 4A-C]. Roy also discloses the local computer used a web browser to run an interactive applet [Roy, col18 lines 41-67]

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the web browser using on the local computer as taught by Roy into the Hemlich's apparatus in order to utilize the user interface. Doing so would provide a dynamic and efficient communication process between the user node and network server (or remote computer).

7. As per claims 21,3 Hemlich-Roy disclose the step of delivering includes delivering one (or more) web pages that identify said components and that include at least one control which, when selected, initiates an operation for placing an order over said network for at least one of said components [Roy, HTML page, col 19 lines 52-64].

8. As per claims 22,4 Hemlich-Roy disclose the step of automatically determining components includes the steps of-automatically determining, based on said user-specified requirements, a plurality of suggested components, each of which may be used to design a circuit that satisfies said user-specified functional requirements; delivering to said browser over said network one (or more) suggested component web

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pages that identify said plurality of suggested components [Hemlich, the MME is taught how to respond to future conditions based on historical data, and learns to respond to new conditions, col 4 lines 12-30; the virtual tools predict the required time, cost, characteristics of the next generation devices to complete the design effort, col 25 lines 40-58]; in response to selection of a suggested component of said plurality of suggested components identified in said one (or more) suggested component web pages, receiving from said browser over said network a message that identifies the selected suggested component; and automatically determining, based on said user-specified requirements and said selected suggested component, components for constructing a circuit that includes said selected suggested component and that satisfies said user-specified functional requirements [Roy, web browser run an interactive applet, col 18 lines 41-67].

9. As per claims 23,5 Hemlich-Roy disclose the step of delivering to said browser over said network one (or more) suggested component web pages includes delivering one (or more) suggested component web pages that specify [Roy, web browser run an interactive applet, col 18 lines 41-67], for each suggested component of said plurality of suggested components, a price value [Roy, the cost of manufacturing the PCB, col 3 lines 38-49].

10. As per claims 24,6 Hemlich-Roy disclose the step of delivering to said browser over said network one (or more) suggested component web pages includes delivering

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one (or more) suggested component web pages that specify, for each suggested component of said plurality of suggested components, a component identifier and one (or more) operating values [Roy, the cost of manufacturing the PCB, col 3 lines 38-49].

11. As per claims 25,7 Hemlich-Roy disclose instructions for performing the steps of determining a set of alternative components for a particular component of said components, wherein each alternative component in said set of alternative components may be used in said circuit in place of a particular component; delivering to said browser over said network one or more web pages that identify said components and that include a control that is associated said particular component; in response to selection of said control, displaying on said browser said set of alternative components; and in response to selection of one of said alternative components, updating said design to include said selected alternative component in place of said particular component [Hemlich, an alternate set of applications, col 25 lines 3-12].

12. As per claims 26,8 Hemlich-Roy disclose said operation for placing an order is an operation for placing an order for a kit that includes a plurality of said components [Roy, a method then selects one or more values associated with the components, col 5 lines 42-67].

13. As per claims 27,9 Hemlich-Roy disclose said operation for placing an order is an operation for placing an order for a kit that includes all of said components [Roy, measuring an equivalent resistance of a plurality of components, col 6 lines 1-24].

14. As per claims 28,10 Hemlich-Roy disclose said operation for placing an order is an operation for placing an order with another party for the other party to construct a said circuit [Hemlich, Pseudo Placement Function, col 12 lines 53-65].

15. As per claims 29,11 Hemlich-Roy disclose instructions for performing the step of automatically determining, based on said user-specified requirements, one (or more) prefabricated circuits for that satisfy said user-specified functional requirements [Hemlich, the MME is taught how to respond to future conditions based on historical data, and learns to respond to new conditions, col 4 lines 12-30; the virtual tools predict the required time, cost, characteristics of the next generation devices to complete the design effort, col 25 lines 40-58].

16. As per claims 30,12 Hemlich-Roy disclose instructions for performing the step delivering to said browser over said network one (or more) web pages that identify said one (or more) prefabricated circuits and that include at least one control which, when selected, initiates an operation for placing an order over said network for at least one of said one (or more) pre-fabricated circuits [Hemlich, capture tool-specific format, col 12 lines 42-52].

17. As per claims 31,13 Hemlich-Roy disclose the user-specified functional requirements include one or more input values [Hemlich, selecting input parameters, col 26 lines 28-37]; and the step of automatically determining components includes applying one or more input values from said user-specified functional requirements to a formula (i.e.: Web form) to determine one (or more) required parameter values, and determining said components based on said one (or more) required parameter values [Roy, parameters and variables of interest, col 7lines 45-60; select one or more specific locations, col 13 lines 43-58].

18. As per claims 32,14 Hemlich-Roy disclose the steps of providing data that identifies said components and said topology to a schematic design generation module; and delivering to said browser, based on output from said schematic design generation module, one (or more) web pages that display a schematic design of said circuit that includes said components arranged according to said design [Roy, topology and schematic, col 7 lines 30-44].

19. As per claims 33,15 Hemlich-Roy disclose the user-specified functional requirements include one (or more) input values; and the step of automatically determining components includes applying one or more input values from said user-specified functional requirements to a formula to determine one (or more) required parameter values, and the step of automatically determining components includes

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determining components that have specific operational values; the step of providing data that identifies said components includes providing data that identifies components with said specific operational values; and the step of delivering one (or more) web pages that display a schematic design of said circuit includes delivering to said browser a web page that displays an arrangement of said components with said specific operational values [Roy, parameters and variables of interest, col 7 lines 45-60; select one or more specific locations, col 13 lines 43-58].

20. As per claims 34,16 Hemlich-Roy disclose the steps of storing, on server-side storage, design data that specifies the design of said circuit and data that associates the design data with said user; and delivering to said browser a web page that identifies a set of previously saved designs associated with said user, said previously saved designs including the design of said circuit; and in response to user input at said browser, delivering to said browser a web page that includes a schematic diagram generated based on the design data stored on said server-side [Roy the local computer with browser and the remote computer, Fig 8A, col 18 line 23-col 19 line 50].

21. As per claims 35,17 Hemlich-Roy disclose the steps of in response to user input at said browser that indicates that said design is to be shared with a second user, storing data that associates the design data with said second user; delivering to a second browser operated by said second user a web page that identifies a set of previously saved designs associated with said second user, said previously save

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designs including the design of said circuit; and in response to user input at said second browser, delivering to said second browser a web page that includes a schematic diagram generated based on the design data stored on said server-side [Roy, database 840 provides the shared information, Fig 8A].

22. As per claims 36,18 Hemlich-Roy disclose the step of automatically determining components includes determining components that have specific operational values; the step of providing data that identifies said components includes providing data that identifies components with said specific operational values; and the step of delivering one (or more) web pages that display a schematic design of said circuit includes delivering to said browser a web page that displays an arrangement of said components with said specific operational values [Roy, adapts automatically to the actual physical dimensions of the apparatus, col 8 lines 53-63].

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Thong Vu, whose telephone number is (703)-305-4643.

The examiner can normally be reached on Monday-Thursday from 8:00AM- 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, *Jack Harvey*, can be reached at (703) 305-9705.

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Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9700.

Any response to this action should be mailed to: Commissioner of Patent and Trademarks, Washington, D.C. 20231 or faxed to :

After Final (703) 746-7238

Official: (703) 746-7239

Non-Official (703) 746-7240

Hand-delivered responses should be brought to Crystal Park 11,2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

*Thong Vu*  
*Patent Examiner*  
*Art Unit 2142*

A handwritten signature in black ink, appearing to read 'Thong Vu', with a long horizontal stroke extending to the right.